



PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Kazuaki WATANABE et al.

Group Art Unit: 1714

Application No. 10/001,256

Examiner: Callie E. Shosho

Filed: November 2, 2001

For: INK COMPOSITION FOR INK JET PRINTER

DECLARATION UNDER 37 CFR §1.132

Honorable Commissioner of Patents and Trademarks
Alexandria, VA 22313-1450

Sir:

I, Kazuaki Watanabe, do declare and state that:

I graduated from Osaka University, School of Engineering Science, Course of Synthetic Chemistry in March of 1985.

I graduated from Graduate School of Engineering Science of said university, Course of Chemistry, receiving a Master's Degree in March of 1987.

I was employed by Seiko Epson Corporation in April of 1987, and since that time to October of 1992, I had been principally engaged in research and development relating to semiconductors in said company.

Since November of 1992 up to September of 2002, I had been principally engaged in development and designing

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relating to inks for ink jet printers, particularly pigment inks, in the Imaging & Information Products Division, the TP R&D Department of said company.

Since October of 2002, I have been principally engaged in intellectual property-related matter in TP Intellectual Property Department of said Imaging & Information Products Division.

I am the first-named inventor of the invention described and claimed in the above-identified application and am familiar with the Office Action dated July 7, 2003 issued therein.

The following comparative experimentation was conducted by me or under my supervision to demonstrate the unexpected superiority of the presently claimed invention.

EXPERIMENTATION

Comparative Example 2:

Ink Set G was prepared in the same manner as for Ink Set A used in Example 1, except that Surfynol 104 and triethylene glycol monobutyl ether used in ink compositions constituting Ink Set A were replaced with 5% by weight diethylene glycol monobutyl ether.

The thus obtained Ink Set G was evaluated in the same manner as for Ink Set A and the results obtained are shown

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in the Table below together with the results of Example 1 (Ink Set A) and Comparative Example 1 (Ink Set F) of the present specification.

	Example 1 Ink Set A	Comp. Ex. 1 Ink Set F	Comp. Ex. 2 Ink Set G
Pigment	3.1%	3.1%	3.1%
Styrene-acrylic acid copolymer (dispersant resin, Acid value: 120)	0.6%	0.6%	0.6%
Emulsion 1 (of sulfonyl group- containing diene-based resin)	6.7%		6.7%
Glycerin	10%	10%	10%
Surfynol 104	1%	1%	
Triethylene glycol monobutyl ether	5%	5%	
Diethylene glycol monobutyl ether			5%
Purer water	Remainder	Remainder	Remainder
Cohesion differential	A	B	B
Gloss differential	A	C	C
Glossiness	A	C	C
Bronzing	A	B	A
Fixing ability	A	C	A
Ejection stability	A	A	B

As can be seen from the above-shown results, Ink Set A of the invention shows unexpected superior effects, compared to comparative Ink Sets F and G which do not satisfy either one of the presently claimed requirements concerning the specific resin emulsion and the specific combination of ultra-penetrating agents.

I declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that

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willful false statements and the like so made are punishable by fine or imprisonment, or both, under 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date: _____

Kazuaki Watanabe